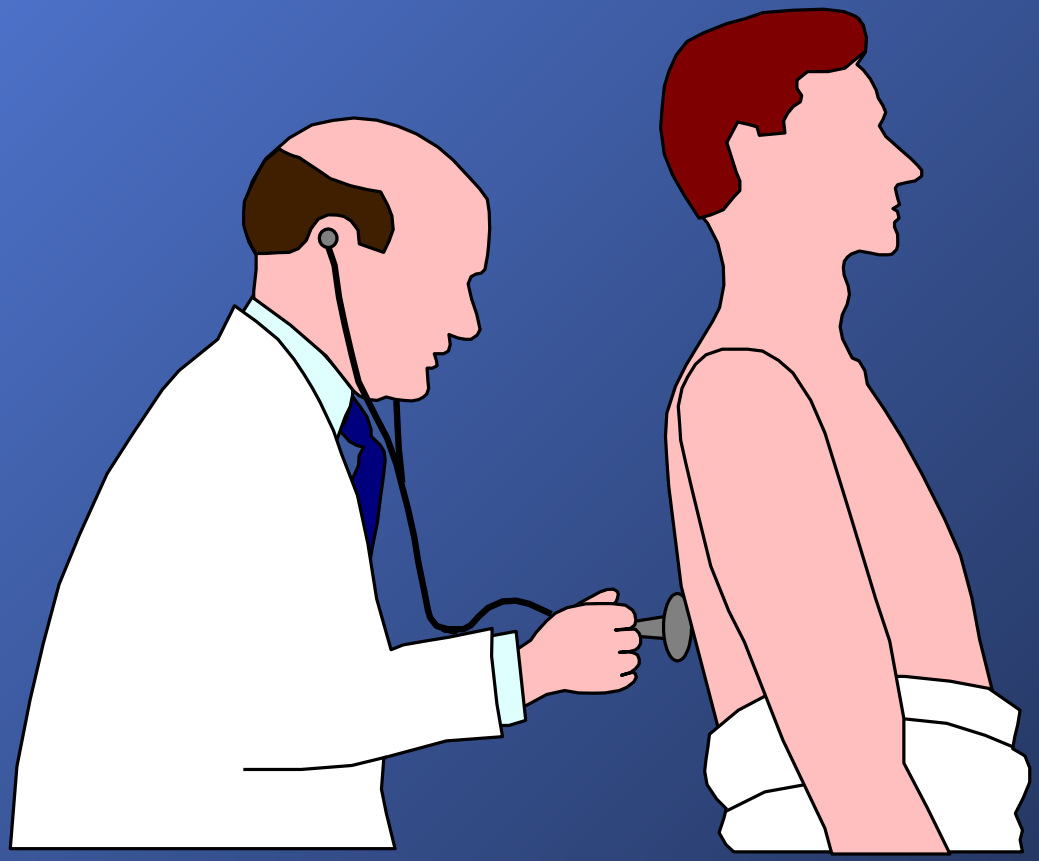
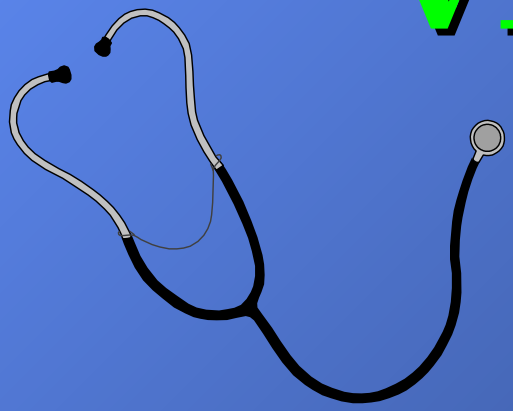
VITAL SIGNS

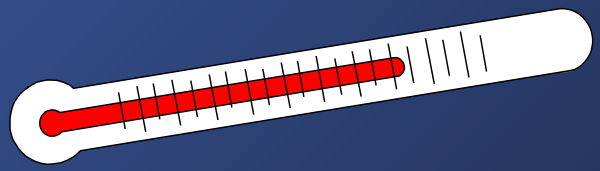


VITAL SIGNS



Objective

- Identify the components of vital signs



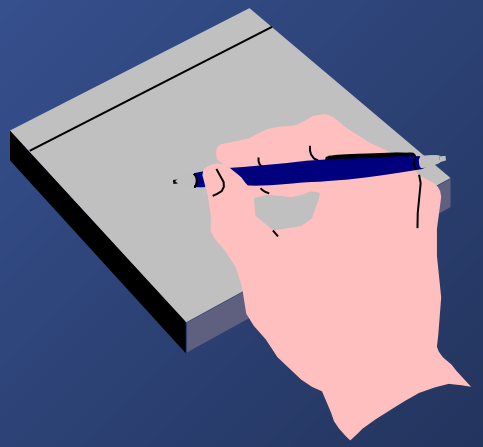
VITAL SIGNS

Overview

- General Information
- Baseline Vital Signs
- SAMPLE History

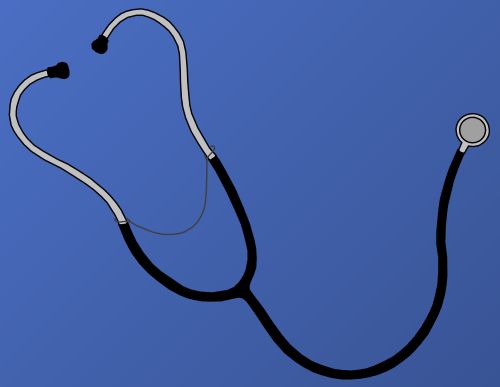
GENERAL INFORMATION

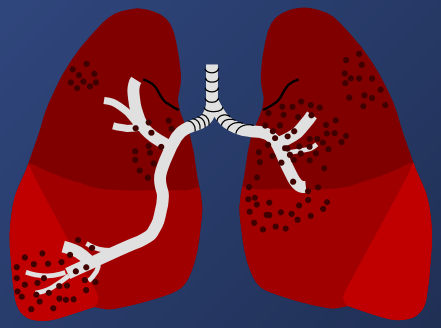
- Chief complaint
- Age
- Sex
- Race



BASELINE VITAL SIGNS

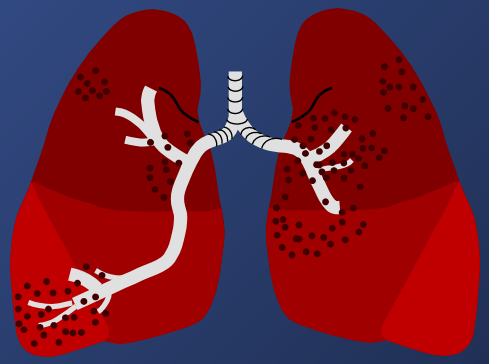
- **Respirations** (Breathing)
- **Pulse**
- **Skin Characteristics**
- **Pupils**
- **Blood Pressure**
- **Reassessment**





RESPIRATIONS (Breathing)

- Assessed by observing the patients chest rise and fall
- <u>Rate</u> - Count # of breaths for 30 seconds and multiply by two
- Don’t inform the patient of this assessment!

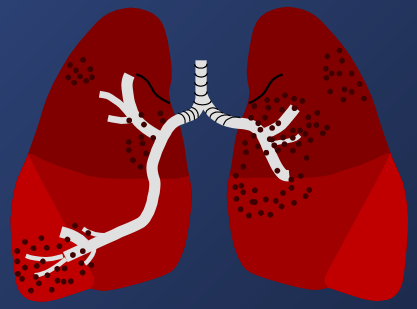


QUALITY

- Determined while assessing the rate

- **Normal** - average chest wall motion with no use of accessory muscles

- **Shallow** - slight chest or abdominal wall motion



QUALITY

- **Labored (cont.)**
  - **Increased breathing effort**
  - **Grunting and stridor**
  - **Often characterized by the use of accessory muscles**

QUALITY

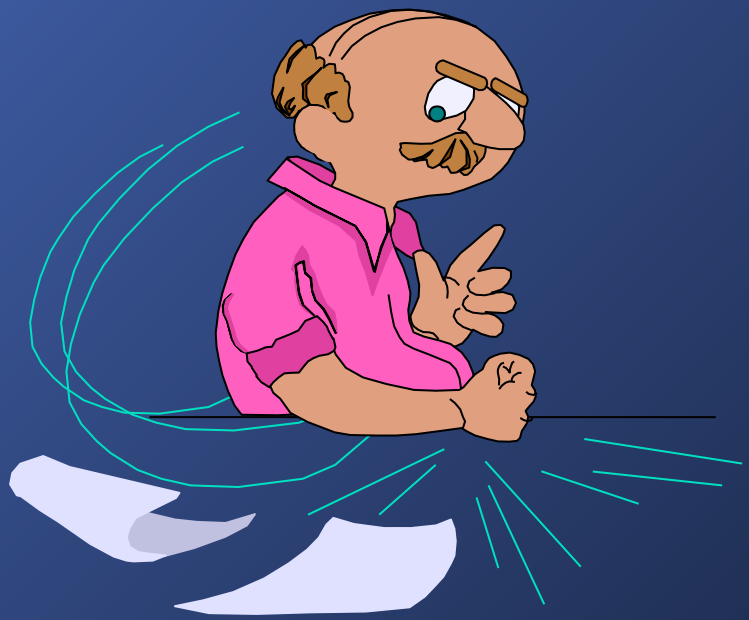
- **Labored (cont.)**
  - **Nasal flaring, supraclavicular and intercostal retractions in infants and children**
  - **Sometimes gasping**

QUALITY

- **Noisy - an increase in the audible sound of breathing**
  - **May include:**
    - **Snoring**
    - **Wheezing**
    - **Gurgling**
    - **Crowing**

PULSE

- Pressure wave that is felt as the heart contracts



PULSE

- **<u>Radial</u> pulse should be assessed in all patients one year or older**

- **<u>Brachial</u> pulse should be assessed in patients less than one year**

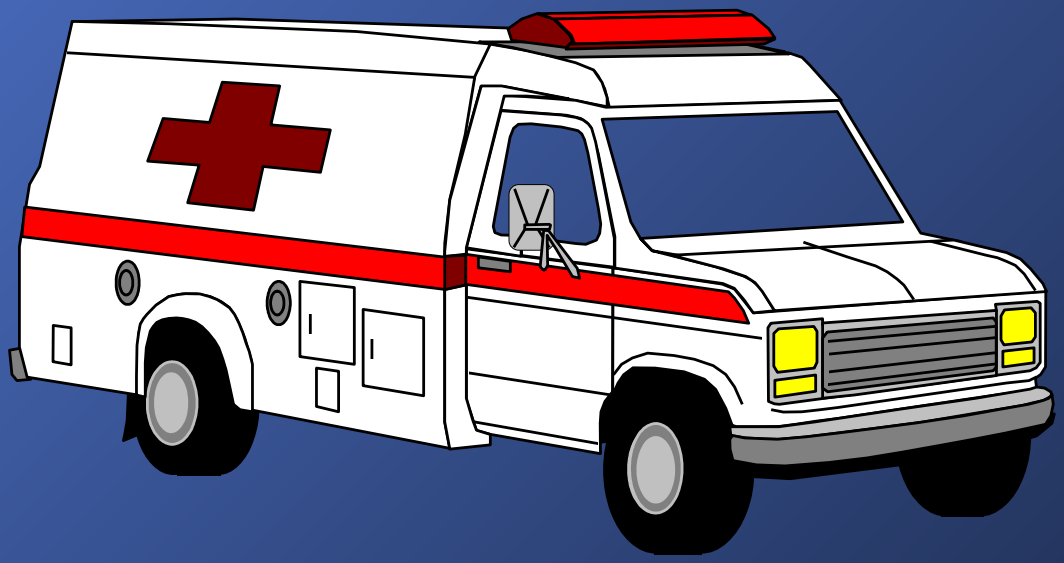
PULSE

- If the pulse is present, assess the <u>rate</u> and <u>quality</u>
  - <u>Rate</u> - number of beats in 30 seconds multiplied by 2
  - <u>Quality</u>
    - Strong
    - Weak
    - Regular
    - Irregular

PULSE

- If peripheral pulse is not palpable, assess carotid pulse
  - Use caution. Avoid excess pressure on geriatrics
  - Never attempt to assess carotid pulse on both sides at one time

What have we covered so far...



SKIN CHARACTERISTICS

- Color
- Temperature
- Moisture
- Capillary Refill

SKIN CHARACTERISTICS

- The patient's color should be assessed in the nail beds, oral mucosa, and conjunctiva
  - In infants and children, palms of hands and soles of feet should be assessed

COLOR

- Normal skin - pink
- Abnormal
  - Pale - indicating poor perfusion (impaired blood flow)
  - Cyanotic - (blue-gray) - indicating inadequate oxygenation or poor perfusion

COLOR

- Abnormal skin color (cont.)
  - Flushed (red) - indicating exposure to heat or carbon monoxide poisoning
  - Jaundice (yellow) - indicating liver abnormalities

TEMPERATURE

- **Skin temperature - taken by placing the back of your hand on the patient's skin**

TEMPERATURE

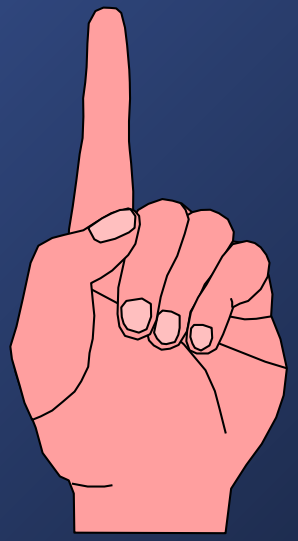
- Normal - warm (98.6 F)
- Abnormal
  - Hot - fever or an exposure to heat
  - Cool - poor perfusion or exposure to cold
  - Cold - extreme exposure to cold

MOISTURE (condition)

- Normal - dry
- Abnormal - wet, moist, excessively dry

CAPILLARY REFILL

- Assess in infants and children less than six years of age
  - Press on the patient's skin or nail beds and determine time for return to initial color
    - Normal - < 2 seconds
    - Abnormal - > 2 seconds



PUPILS

- **Pupils are assessed by briefly shining a light into the patient’s eyes, and determining size and reactivity**

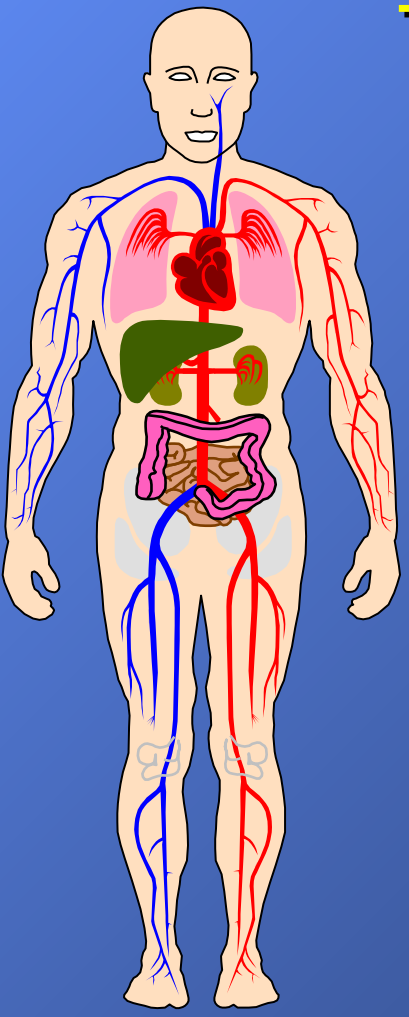
PUPILS

- Dilated (very big)
- Normal
- Constricted (small)
- Equal or unequal

PUPILS

- **Reactivity**
  - **Reactive - change when exposed to light**
  - **Non-reactive - don’t change when exposed to light**
  - **Equally or unequally reactive -**

BLOOD PRESSURE



- Pressure of circulating blood against the walls of arteries

GENERAL INFORMATION

- Assess systolic and diastolic pressures
  - Systolic blood pressure is the first distinct sound of blood flowing through the artery as the pressure in the blood pressure cuff is released
  - This is a measurement of the pressure exerted against the walls of the arteries during the contraction of the heart

Blood Pressure

- Diastolic blood pressure is the point during deflation of the blood pressure cuff at which sounds of the pulse beat disappear
- It represents the pressure exerted against the walls of the arteries while the left ventricle is at rest

Blood Pressure

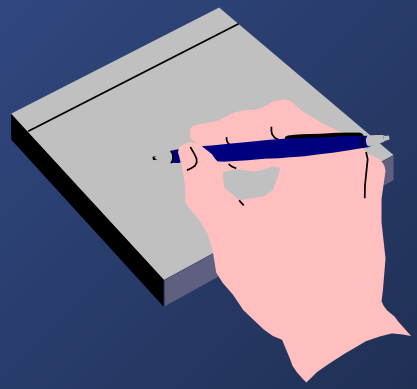
- There are two methods of obtaining blood pressure
  - Auscultation - The EMT-Basic will listen for the systolic and diastolic sounds
  - Palpation - In certain situations, the systolic blood pressure may be measured by feeling for return of pulse with deflation of the cuff

Blood Pressure

- Blood pressure should be measured in all patients older than 3 years of age
- The general assessment of the infant or child patient, such as sick appearing, in respiratory distress, or unresponsive, is more valuable than vital sign numbers

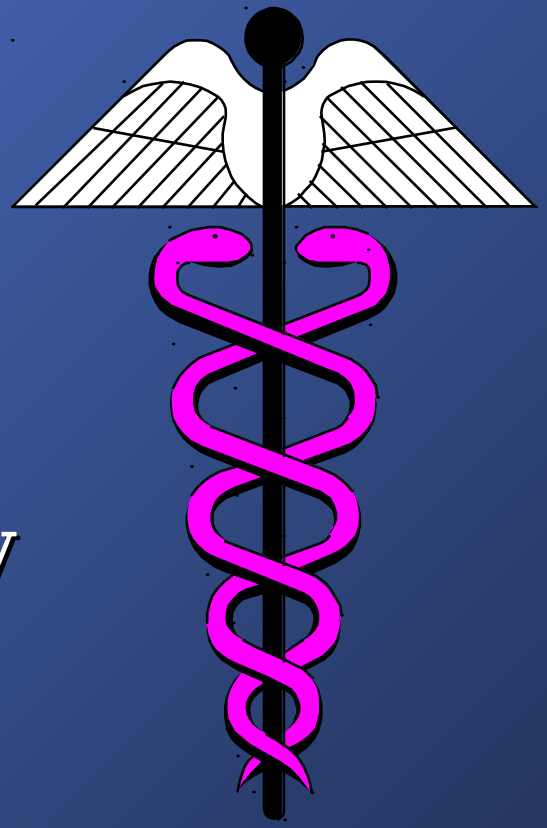
REASSESSMENT OF VITAL SIGNS

- Stable patient - every 15 minutes
- Unstable patient - every 5 minutes
- Should be reassessed following all medical interventions



SAMPLE HISTORY

- **Signs and Symptoms**
- **Allergies**
- **Medications**
- **Pertinent past history**
- **Last oral intake**
- **Events leading to injury or illness**



SIGNS AND SYMPTOMS

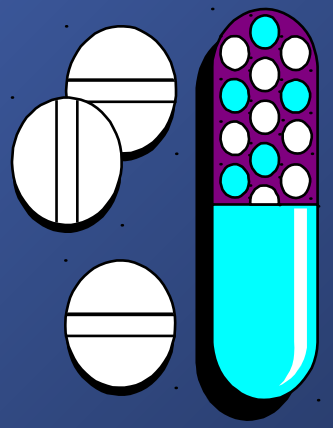
- Sign - any medical or trauma condition displayed by the patient and identifiable by the EMT
  - Hearing - respiratory distress
  - Seeing - bleeding
  - Feeling - skin temperature
- Symptom - any condition described by the patient
  - Shortness of breath

ALLERGIES

- Medications
- Food
- Environmental Allergies
- Consider medical identification tag

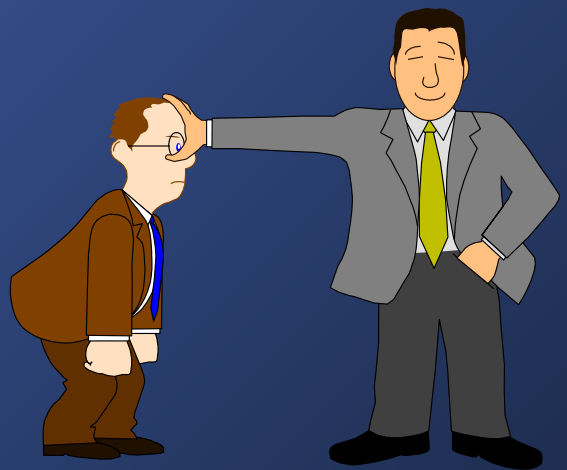
MEDICATIONS

- Prescription
  - Current
  - Recent
  - BCP's
- Nonprescription
  - Current
  - Recent
- Consider medical ID tag



PERTINENT PAST HISTORY

- Medical
- Surgical
- Trauma
- Consider medical ID tag



LAST ORAL INTAKE
(Liquid or Solid)

- Time
- Quantity

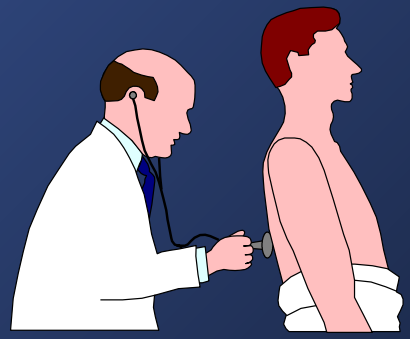
EVENTS LEADING TO THE INJURY OR ILLNESS

- Chest pain with exertion
- Chest pain while at rest

VITAL SIGNS

Summary

- General Information
- Baseline Vital Signs
- SAMPLE History



QUESTIONS?